

Amendments to the Claims

The following listing of claims will replace all prior versions and listing of claims in the application.

1. (Currently Amended) A drive roll adapted and configured to feed weld wire, ~~said drive roll~~ comprising:

- (a) opposing first and second sides;
 - (b) a drive roll body extending between the first and second sides and having an outer circumferential body surface; ~~extending about a periphery of said body; and~~
 - (c) ~~a non-flexible~~ an elevated wire interface, for conveying a weld wire, ~~said elevated wire interface displaced~~ extending radially outwardly from the outer circumferential body surface and defining a first profile shape;
 - (d) a channel extending radially into the outer circumferential surface and defining a second profile shape that is dissimilar to the first profile shape of the elevated wire interface,
- wherein each of the elevated wire interface and channel defines a portion of the outer circumferential surface of the drive roll body.

2. (Currently Amended) A drive roll as in Claim 1, further comprising first and second elevated wire interfaces, ~~extending outwardly from, and axially spaced from each other~~ and each extending along, at least a major circumferential portion of the outer circumferential body surface, and separated from each other.

3. (Currently Amended) A drive roll as in Claim 1 wherein ~~said at least one~~ the elevated wire interface is adjacent, but displaced from, at least one of the first and second sides.

4. (Currently Amended) A drive roll as in Claim 2 wherein ~~at least one of said each~~ of the first and second elevated interfaces is adjacent, but displaced from, at least one of the first and second sides.

5. (Currently Amended) A drive roll as in Claim 1, ~~said first and second~~ wherein the elevated wire interfaces ~~generally defining a~~ and the channel intersect each other and define a peak therebetween, ~~the channel optionally having a bottom corresponding with said outer circumferential body surface.~~

6. (Currently Amended) A drive roll as in Claim 1 wherein ~~said at least one the~~ elevated wire interface ~~comprises first and second elevated circumferential peaks, spaced laterally from each other, and~~ includes a wire conveying groove therebetween extending thereinto, and wherein a cross-section configuration of the groove corresponds in magnitude to a diameter of such weld wire for which said drive roll is designed and configured.

7. (Currently Amended) A drive roll as in Claim 2 ~~wherein at least one said~~ elevated wire interface ~~comprises~~ further comprising first and second channels, ~~elevated circumferential peaks, spaced laterally from each other, and a groove therebetween, and wherein a cross-section configuration of the groove corresponds to a diameter of such weld wire for which said drive roll is designed and configured~~ wherein the first channel and first elevated wire

interface are adjacent each other and the second channel and second elevated wire interface are adjacent each other.

8. (Currently Amended) A drive roll as in Claim ~~4~~ 6, ~~said the wire conveying groove of the~~ elevated wire interface defining ~~a wire interface diameter groove depth dimension,~~ and the channel defining a channel depth dimension, ~~the outer circumferential body surface defining a body diameter,~~ and a magnitude of the ~~wire interface diameter~~ channel depth dimension being greater than a magnitude of the ~~body diameter~~ groove depth dimension.

9. (Currently Amended) A drive roll as in Claim 1, further comprising at least one rim extending outwardly from said outer circumferential ~~body surface~~.

10. (Currently Amended) A drive roll as in Claim 9 wherein said at least one rim ~~defines a rim diameter having a magnitude greater than each of the magnitudes of body diameter and wire interface diameter~~ extends radially further from the outer circumferential surface than the remainder of the drive roll.

11. (Currently Amended) A drive roll as in Claim ~~4~~ 6, ~~said at least one elevated wire interface comprising a circumferential wherein the wire conveying groove extending inwardly from an outer most portion of said elevated wire interface, to a lower most portion of said elevated wire interface, the lower most portion of said elevated wire interface being displaced outwardly, in said drive roll, from said outer circumferential body surface~~ defines a lowermost portion thereof and the channel defines a lowermost portion thereof, the lowermost portion of the

channel being radially nearer an axis of rotation of the drive roll than the lower most portion of the groove.

12. (Currently Amended) A drive roll as in Claim ~~1~~ 6, ~~said at least one elevated wire interface comprising~~ wherein the outermost portions of the wire conveying groove are defined between first and second elevated circumferential peaks, ~~spaced laterally from each other, and a circumferential groove therebetween, and wherein the circumferential groove defines an arcuate cross-section.~~

13. (Currently Amended) A drive roll as in Claim ~~11~~ 6 wherein the ~~circumferential wire conveying~~ groove defines a generally angular cross-section.

14. (Original) A drive roll as in Claim 9 wherein an outermost surface of said rim, from an axis of rotation of said drive roll, defines a generally planar or arcuate profile.

15. (Original) A wire feeder assembly adapted and configured to feed weld wire, said wire feeder assembly comprising a drive roll as in Claim 1.

16. (Original) A welding system comprising a wire feeder assembly as in Claim 15.

17. (Canceled)

18. (Currently Amended) A drive roll adapted and configured to feed weld wire, ~~said drive roll comprising:~~

(a) opposing first and second sides which define a width dimension therebetween; and

(b) a drive roll body extending between the first and second sides, ~~said the drive roll body having an outer circumferential body surface extending between said fir and second sides;~~ and

(c) at least one rim extending radially outwardly from, ~~and along at least a major circumferential portion of, the outer circumferential body surface;~~ ~~said at least one rim which extends radially outwardly further from said drive roll body than the rest of said drive roll~~

(d) at least one channel a channel extending radially into the outer circumferential surface,

wherein one of the at least one rim and one of the at least one channel share a common sidewall segment.

19. (Currently Amended) A drive roll as in Claim 18, further comprising at least one elevated wire interface extending outwardly from, and along, at least a major circumferential portion of said outer circumferential ~~body surface~~.

20. (Currently Amended) A drive roll as in Claim 19, said at least one rim and said at least one elevated wire interface being laterally separated from each other by a distance therebetween which includes at least a portion of said outer circumferential ~~body surface~~.

21. (Currently Amended) A drive roll as in Claim 19 wherein said at least one elevated wire interface extends outwardly from said outer circumferential ~~body~~ surface a first distance ~~(D3)~~ at a given locus on the periphery of the drive roll and wherein said at least one rim extends outwardly from said outer circumferential body surface a second distance ~~(D4)~~ at the given locus on the periphery of the drive roll, the magnitude of first distance ~~(D3)~~ being less than the magnitude of the second distance ~~(D4)~~.

22. (Previously Presented) A drive roll as in Claim 19 wherein said at least one elevated wire interface is spaced from both of the first and second sides.

23. (Currently Amended) A drive roll as in Claim 21 wherein said at least one ~~rim~~ rim is at or proximate at least one of the first and second sides.

24. (Previously Presented) A drive roll as in Claim 19 wherein said at least one elevated wire interface has a circumferential groove extending thereinto.

25. (Original) A drive roll as in Claim 18 wherein the outermost surface of said rim defines a generally planar or arcuate profile.

26. (Original) A drive roll as in Claim 21 wherein the outermost surface of said rim defines a generally planar or arcuate profile.

27. (Original) A drive roll as in Claim 23 wherein the outermost surface of said rim defines a generally planar or arcuate profile.

28. (Original) A wire feeder assembly adapted and configured to feed weld wire, said wire feeder assembly comprising a drive roll as in Claim 18.

29. (Original) A welding system comprising a wire feeder assembly as in Claim 28.

30. (Canceled)

31. (Withdrawn) A drive roll adapted and configured to feed weld wire having a predetermined diameter, said drive roll comprising:

(a) opposing first and second sides,

(b) a drive roll body extending between the first and second sides which define a drive roll width dimension therebetween, said drive roll body having a generally circumferential outer surface, and

(c) an elevated wire interface for conveying a weld wire, said elevated wire interface extending radially outwardly from a portion of the outer circumferential body surface, said elevated wire interface defining a width dimension which is less than the width dimension of said drive roll width dimension.

32. (Withdrawn) A drive roll as in Claim 31 wherein said elevated wire interface has first and second lateral support walls converging toward each other.

33. (Withdrawn) A drive roll as in Claim 32 wherein said elevated wire interface has a groove extending circumferentially thereinto.

34. (Withdrawn) A drive roll as in Claim 33 wherein each of said first and second lateral support walls intersects said groove, defining first and second peaks, respectively, therebetween.

35. (Withdrawn) A wire feeder assembly adapted and configured to feed weld wire, said wire feeder assembly comprising a drive roll as in Claim 31.

36. (Withdrawn) A welding system comprising a wire feeder assembly as in Claim 35.

37. (Canceled)

38. (Withdrawn) A drive roll as in Claim 31, said drive roll comprising first and second elevated wire interfaces for conveying weld wire.

U.S. Serial No.: 10/820,996
Conf. No.: 9049
Art Unit: 1725
Page 10 of 13
Attorney Docket 29759/ITW-14675(1675.004)

39. (Withdrawn) A drive roll as in Claim 38 wherein said first and second elevated wire interfaces are laterally spaced from, and separate and distinct from, each other.

40. (Withdrawn) A drive roll as in Claim 31, further comprising at least one rim extending radially outwardly from said circumferential outer surface.